

Claims

1-11 Canceled

12. (New) A method for stabilizing a car-trailer combination, including a towing vehicle and a trailer moved by the trailing vehicle, the method comprising:

monitoring rolling motions of a towing vehicle, wherein the monitored rolling motions include yaw acceleration; and

performing one or more measures that stabilize driving of the towing vehicle, wherein the measures that stabilize driving of the towing vehicle are controlled based on the yaw acceleration.
13. (New) The method according to Claim 12 further comprising:

determining yaw velocity of the towing vehicle utilizing one or more sensors; and

deriving yaw acceleration by using a model.
14. (New) The method according to Claim 12 further comprising:

determining a maximum yaw acceleration, wherein the measures that stabilize driving of the towing vehicle are initiated based on the determined maximum yaw acceleration.
15. (New) The method according to Claim 12, wherein the measures that stabilize driving of the towing vehicle are maintained until the yaw acceleration reaches a zero value or a value in a tolerance band around zero.
16. (New) The method according to Claim 12, wherein the measures that stabilize driving of the towing vehicle are performed in parallel to an Electronic Stability Program (ESP) control.
17. (New) The method according to Claim 16, wherein the measures that stabilize

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driving of the towing vehicle are executed during an ESP control under a condition that the ESP threshold or thresholds are modified at which an ESP intervention is introduced or terminated when values exceed or fall short of the threshold or thresholds.

18. (New) The method according to Claim 17, wherein at least one ESP threshold is modified so that the ESP intervention is performed only when there is a greater difference between a nominal yaw velocity and an actual yaw velocity.
19. (New) The method according to Claim 16, wherein one of the measures that stabilize driving of the towing vehicle includes performing an ESP brake pre-intervention on at least one wheel.
20. (New) The method according to Claim 19, wherein brake pressure in one or more wheel brake is maintained in a period between two consecutive ESP brake pre-interventions and said brake pressure is rated so that the application travel of the brake remains substantially bridged.
21. (New) The method according to Claim 19 further comprising:

calculating a counter torque for the ESP brake pre-intervention to achieve in correlation to the yaw acceleration according to the relation Counter torque = amplification * $\ddot{\Psi}$.
22. (New) A device for stabilizing a car-trailer combination, including a towing vehicle and a trailer moved by the towing vehicle, the device comprising:

a monitoring device for monitoring rolling motions of a towing-vehicle;

a detector for detecting an actual or expected unstable driving performance of the towing vehicle; and

a controller for controlling one or measures that stabilize driving of the towing vehicle or the car-trailer combination, wherein the controller controls the one or

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more measures that stabilize driving of the towing vehicle based on the rolling motions.

23. (New) The device of claim 22 further comprising:

an Electronic Stability Program (ESP) control having a yaw rate sensor for sensing yaw velocity and a determining unit that calculates quantities representing the yaw acceleration based on the sensed yaw velocity, wherein the ESP control controls the brake pressure in at least one wheel brake based upon the calculated quantities.